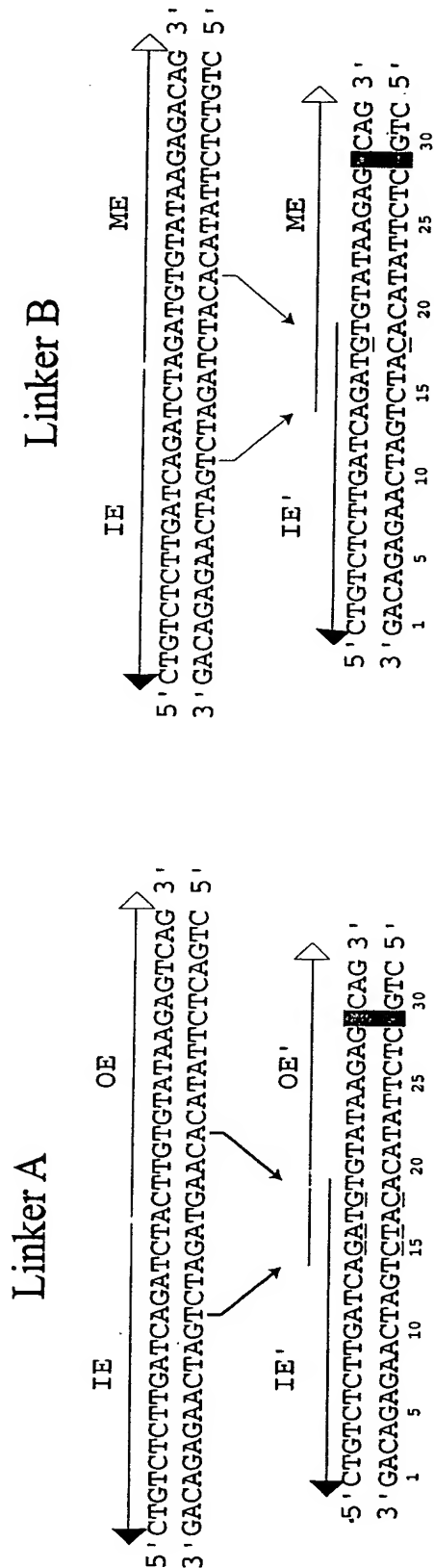


DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS  
 Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff  
 Application No.:  
 Docket Number: 960296.;97541

1/10

FIG 1



# DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

Docket Number: 960296.;97541

2/10

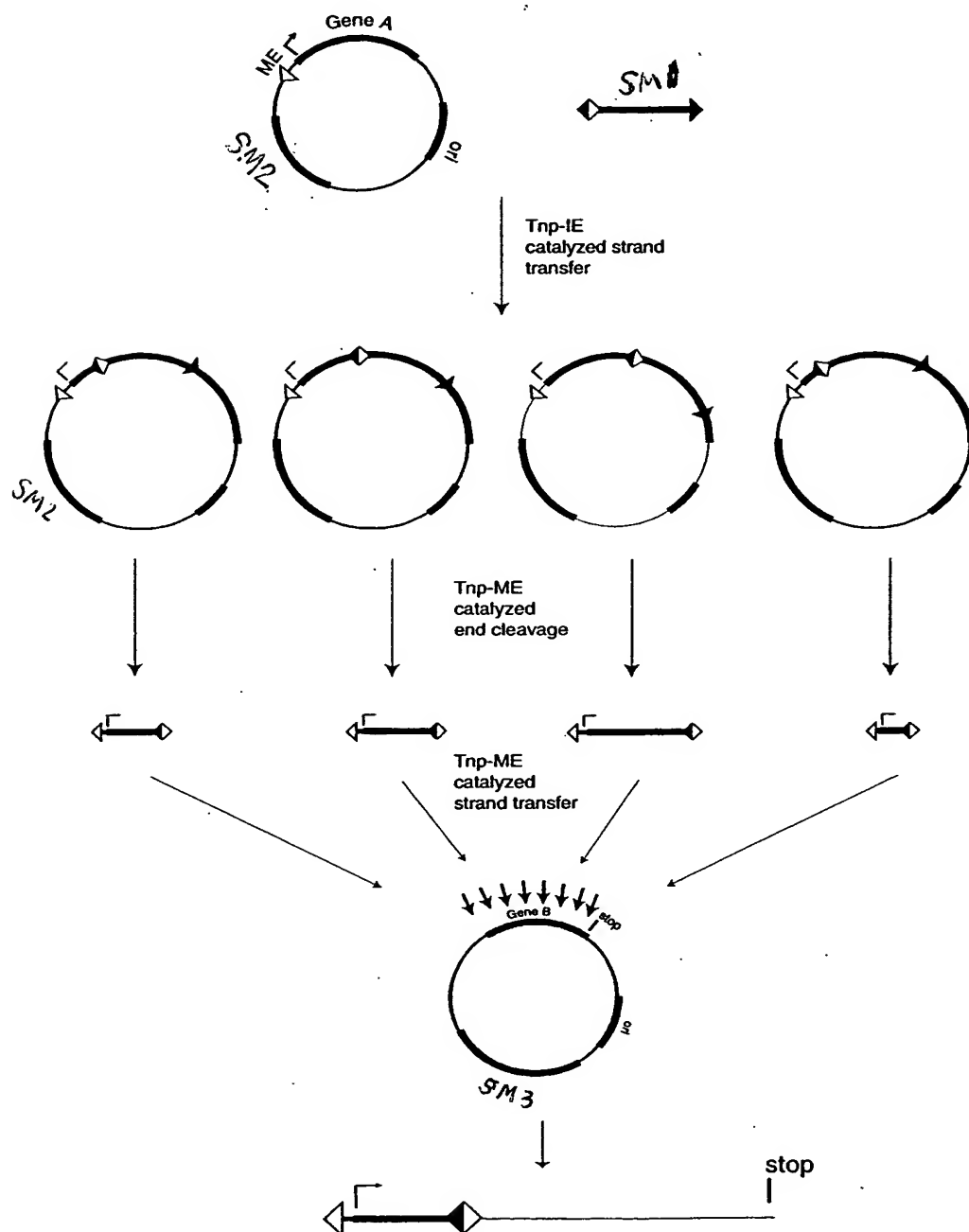


FIG 2

# DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

Docket Number: 960296.;97541

3/10

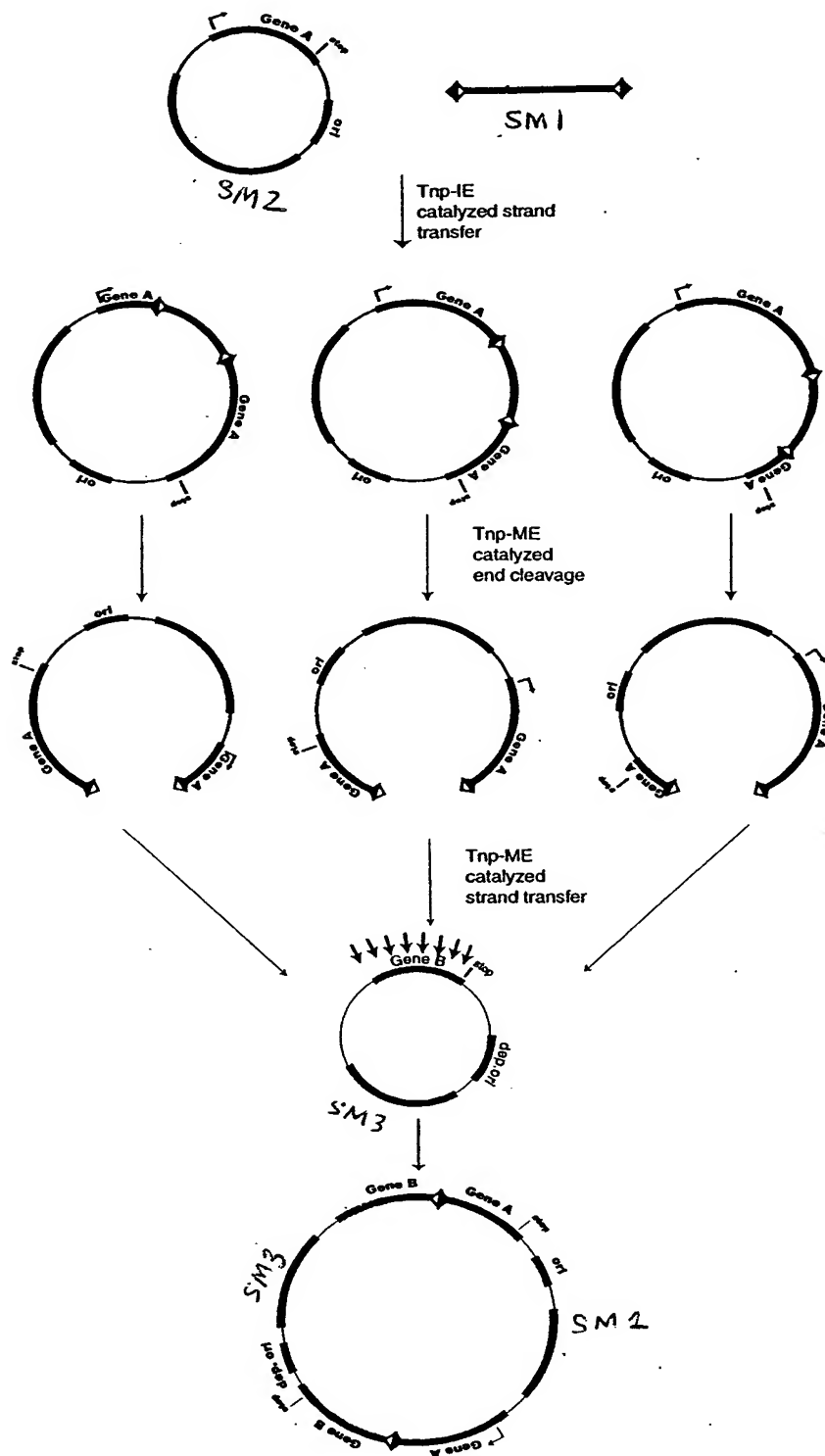


FIG 3

# DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

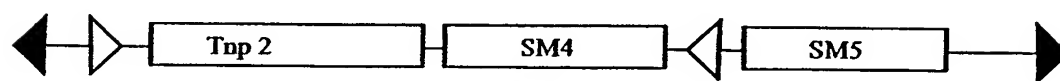
Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

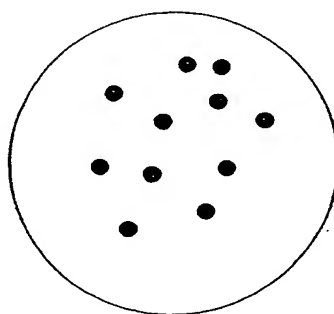
Docket Number: 960296.;97541

4/10

## Chromosomal insertion of transposon via co-delivery.



1. Incubation with Tnp 1, no Mg
2. Electroporation into cells.



Select chromosomal inserts on SM4 + SM5

◀ = IE

◁ = ME

FIG 4

# DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

Docket Number: 960296.;97541

5/10

In vivo transposition.

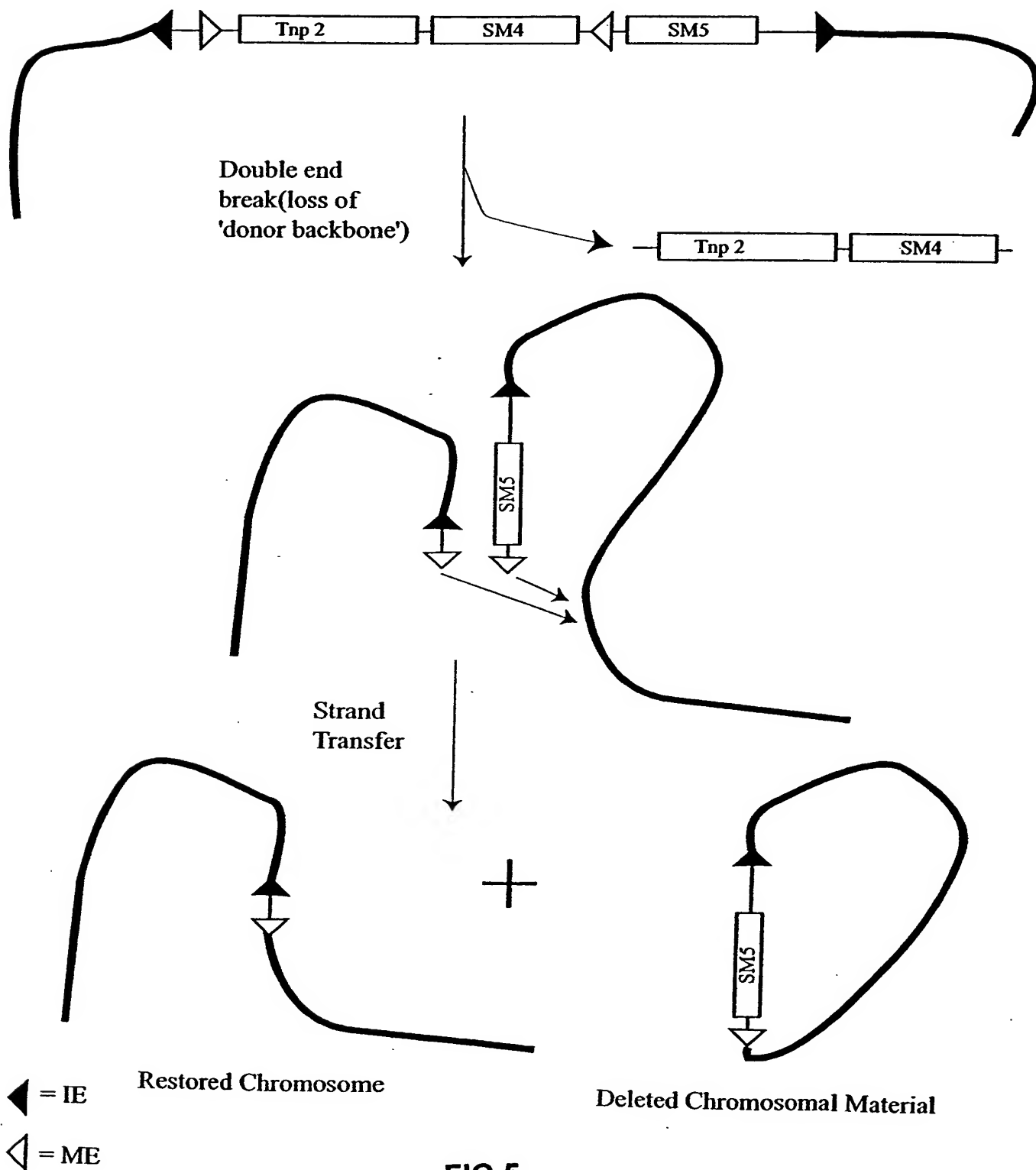


FIG 5

# DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

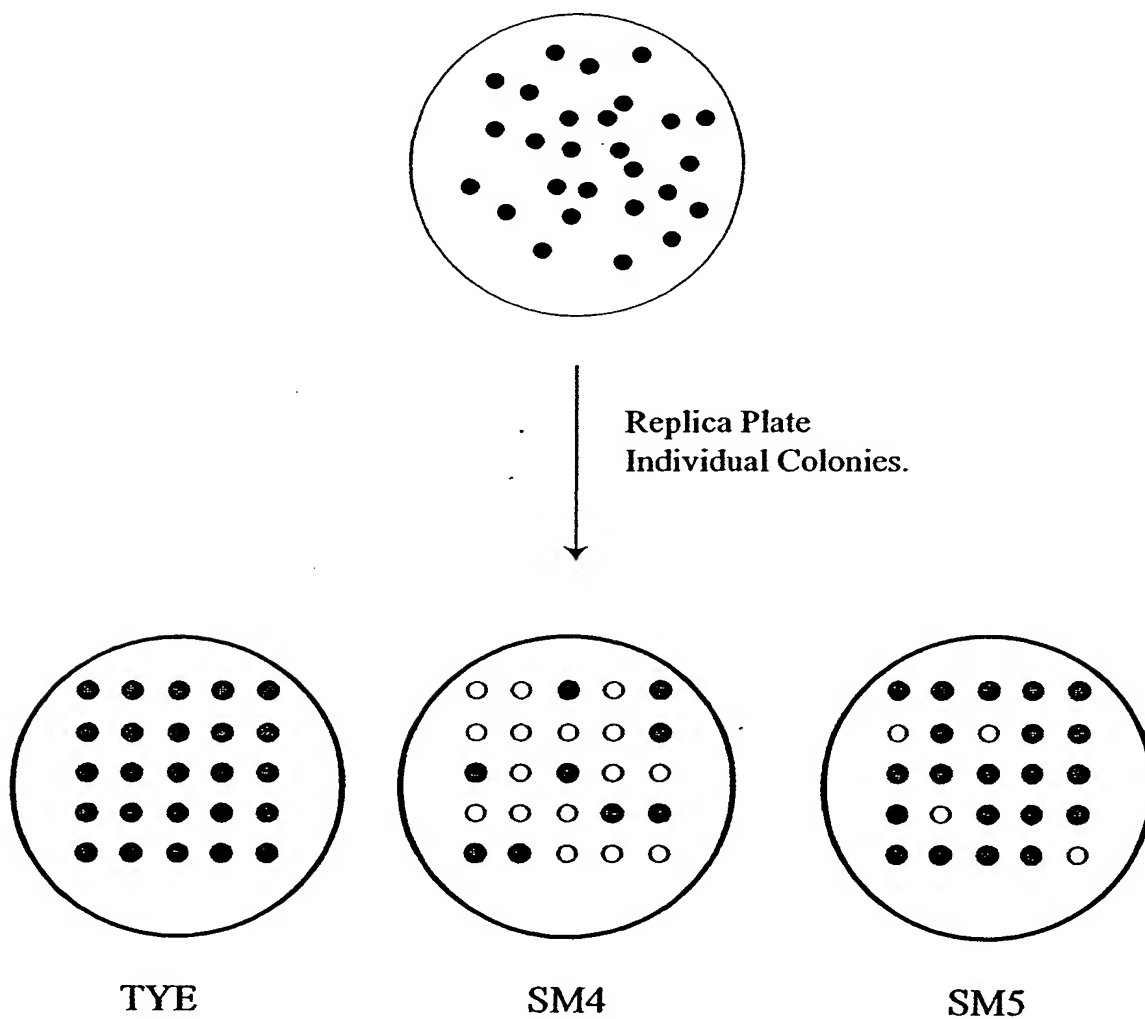
Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

Docket Number: 960296.;97541

6/10

Screen for chromosomal deletions.



$SM4^R + SM5^R = \text{No transposition}$

$SM4^S + SM5^R = \text{Transposition event: Inversion or 'wrong' deletion}$

$SM4^S + SM5^S = \text{Transposition event: Deletion}$

FIG 6

# DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

Docket Number: 960296.;97541

7/10

## Direct cloning of chromosomal DNA.

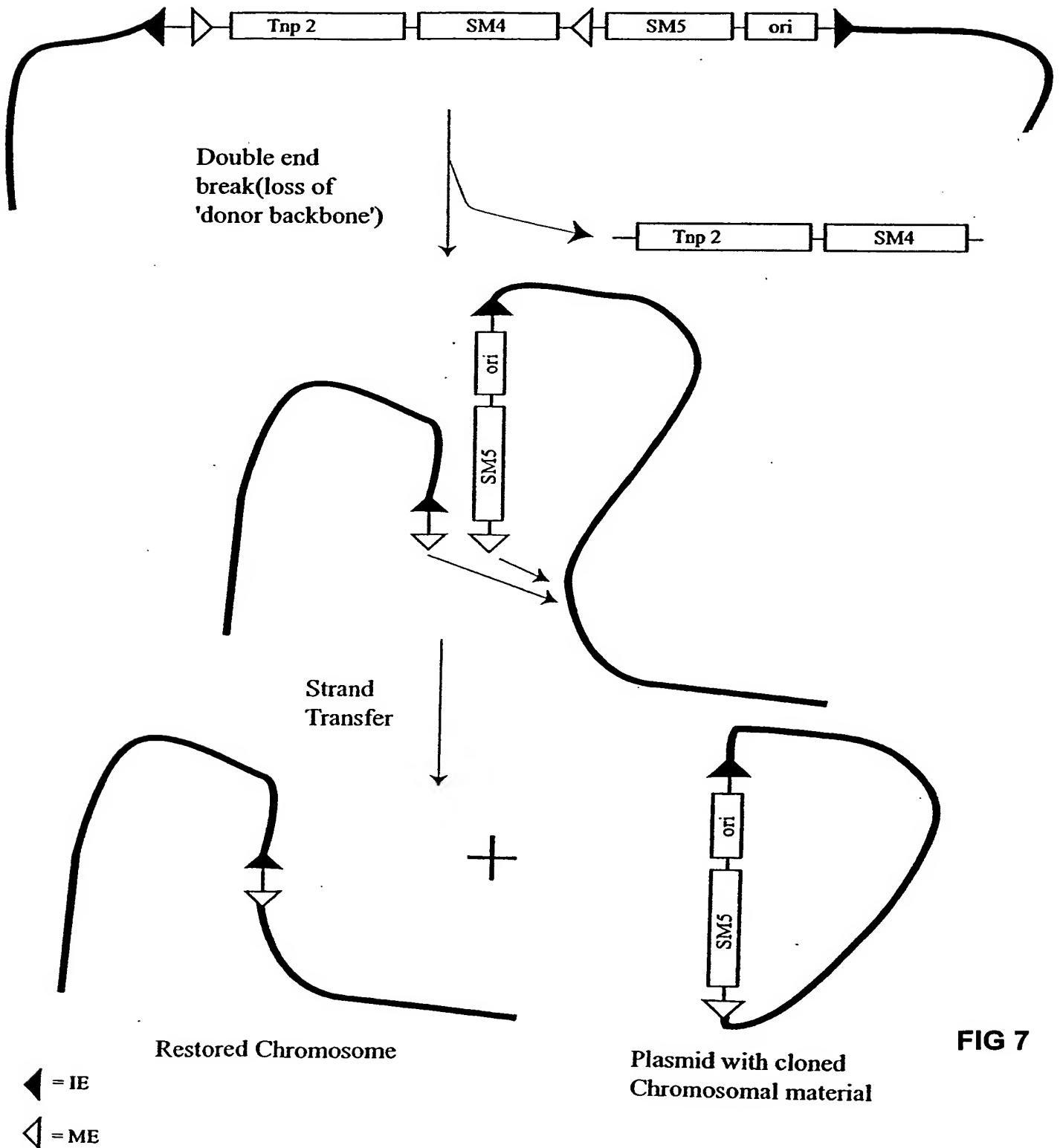


FIG 7

# DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

Docket Number: 960296.;97541

8/10

## Insertion of DNA and removal of drug marker.

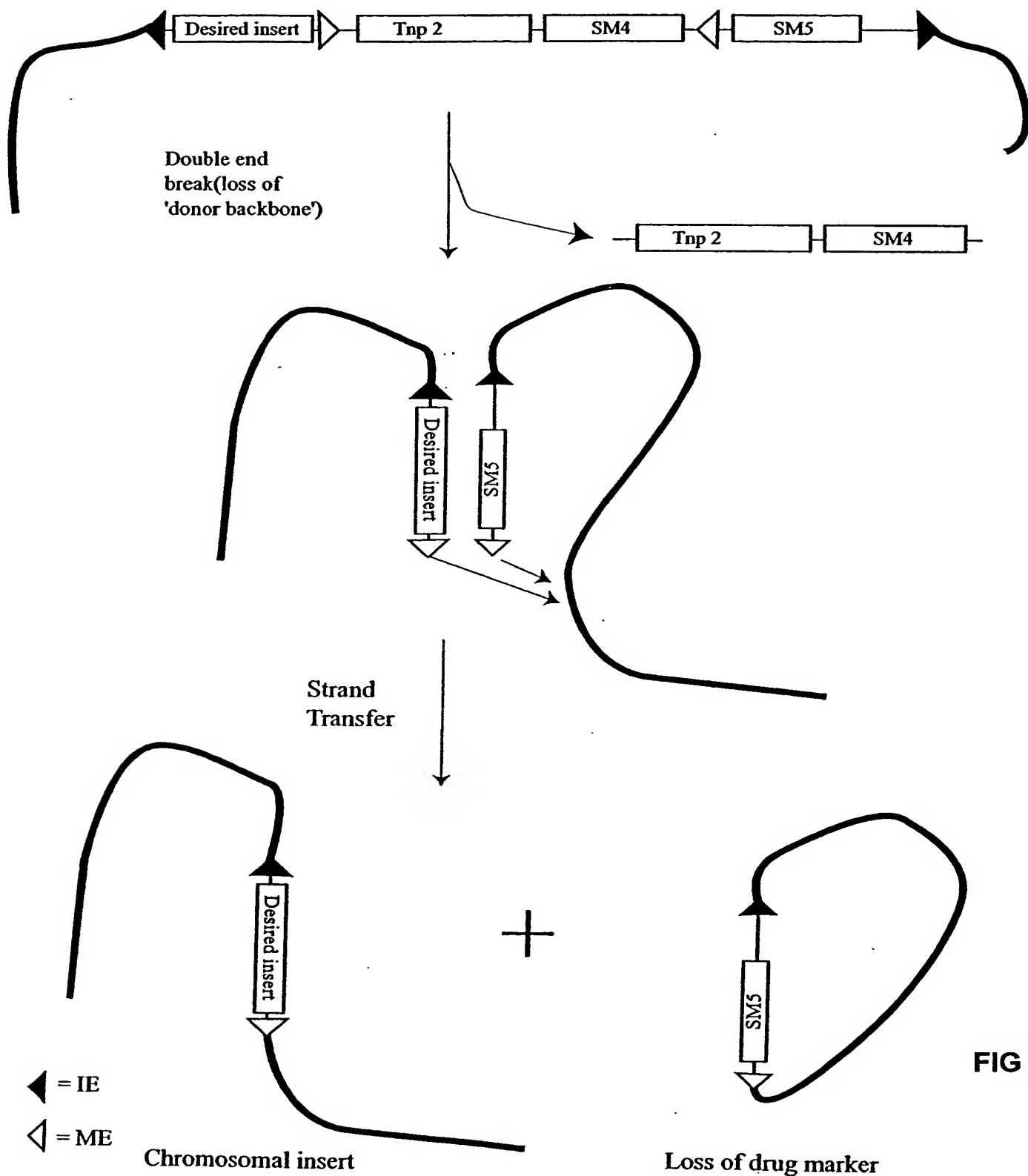


FIG 8



# DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

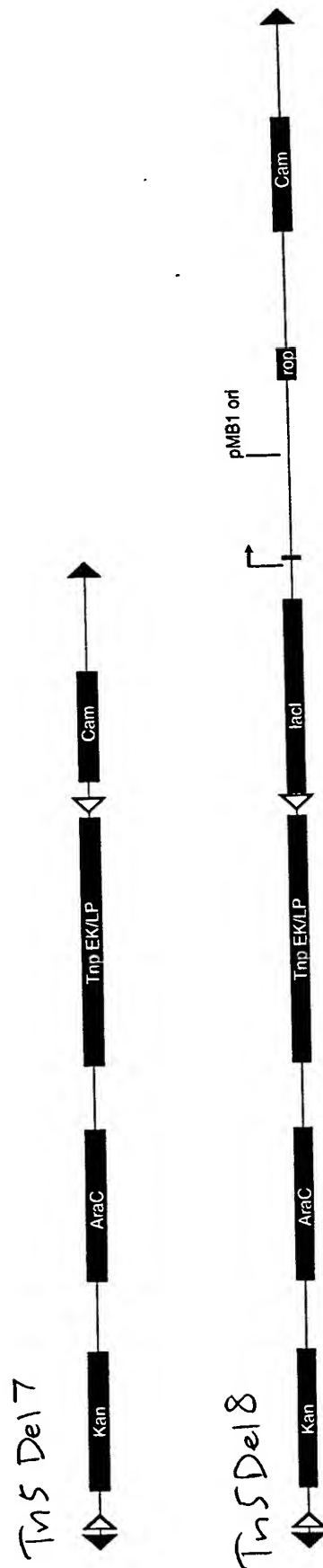
Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

Docket Number: 960296.;97541

9/10

FIG 9



DOUBLE TRANSPOSITION METHODS FOR MANIPULATING NUCLEIC ACIDS

Inventors: Igor Yu Goryshin/Todd A. Naumann/William S. Reznikoff

Application No.:

Docket Number: 960296.;97541

10/10

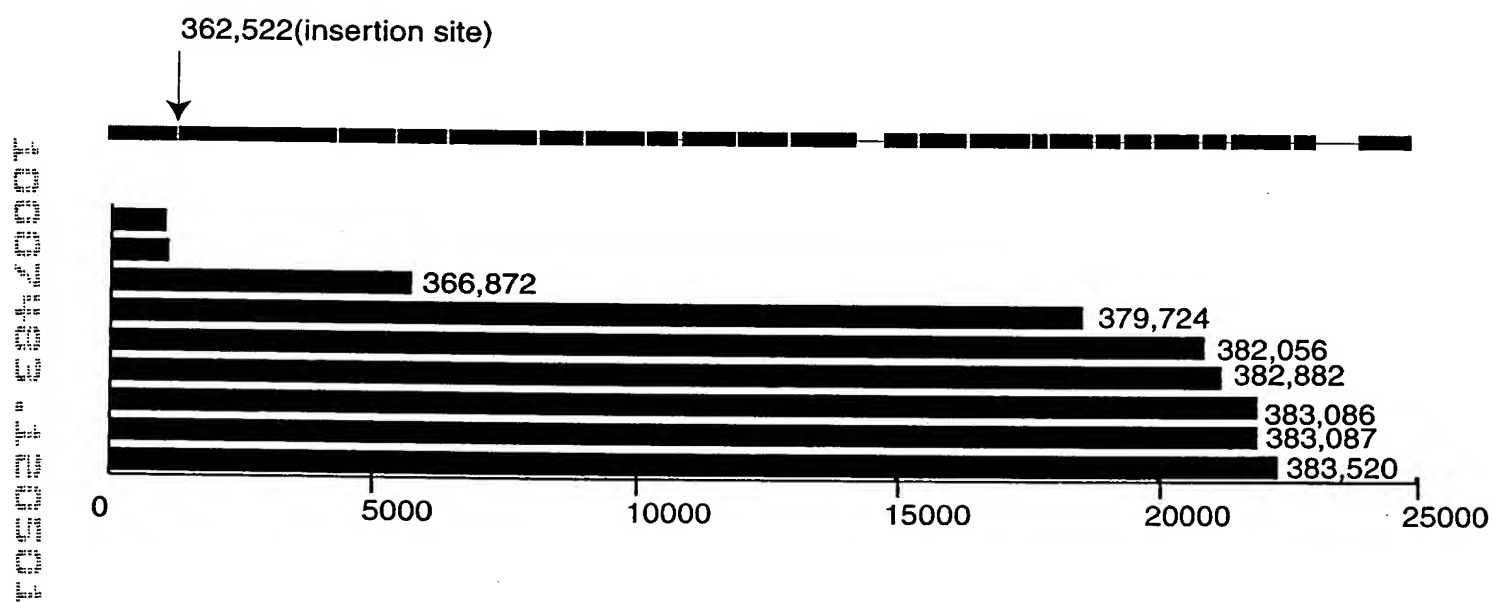


FIG 10